

JEFF

Enclosed is the info. you requested.  
The stamps are your refund for  
over-payment of the return  
postage. I'm sure they will come  
in handy when sending for  
other SASE info from the U.S.

The only place I know that you  
might mail-order a 1520 is from  
ALL ELECTRONICS - another CANADIAN  
fellow has told me that he has ordered  
one from them - More info on encl. sheets.

John —

NOTE: If the above graphics plot sample looks familiar, it is because it appears on the loader screen of Digital Integration's Fighter Pilot program. Transferring it to the plotter, as well as formatting this order form, was done with the SCREEN-TO-PLOTTER utility program and a joystick. Please write if you have any questions concerning the I/F that I've missed answering or call me at 1-307-742-4530 evenings.

## ORDER FORM

prepaid orders only....no credit cards please

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY/STATE/ZIP: \_\_\_\_\_

QUANT.	DESCRIPTION	PRICE EACH	TOTAL
	BARE BOARD W/CASSETTE	\$14.95 ppd	
	KIT OF BOARD, PARTS, & CASSETTE	\$20.95 ppd	
	ASSEMBLED & TESTED W/CASSETTE	\$30.95 ppd	
	KEYED EDGE CONNECTOR (ONLY IF PURCHASED WITH ANY OF THE ABOVE)	\$4.95 ppd	
	SCREEN-TO-PLOTTER utility prog.	\$8.95 ppd	

5% SALES TAX (WYO RESIDENTS ONLY)

TOTAL ENCLOSED

SEND ALL ORDERS TO:

JOHN MICHAEL, 1710 PALMER DR., LARAMIE, WY. 82070

## AFFORDABLE PLOTTING FOR THE 2068

First, thanks for responding to my ad. It just confirms my hunch that, with all the 2068 is capable of doing these days, interfacing to a plotter, for one reason or another, has for too long been beyond the realization of most Timexers. My own low-budget computing forced me to wait for the day to come when I could watch the mechanical magic of a plotter that was being driven by my 2068. I'm happy to announce that the day has finally arrived!

When the Commodore 1520 printer/plotter recently dropped in price to \$49.95, I jumped at the now affordable way to make my dream of interfacing to a plotter come true. The job was a little more involved than I had anticipated and I soon had to purchase a used VIC 20 in order to determine what sort of serial signals and timing the 1520 required. With more than my usual luck with projects like this, the interfacing hardware and software were developed and debugged and before long my 2068 was running the 1520 every bit as effectively as the VIC 20 did!

The driver software is written such that every function the 1520 is capable of can be controlled with the 2068's BASIC LPRINT command. It is a simple matter to replace PLOT and DRAW commands in a program with their corresponding LPRINT plotter commands for hi-resolution four color hard-copy graphic plotting.

### ----- 1520 Printer/Plotter Specifications: -----

- \* High quality plotter mechanism manufactured by ALPS.
- \* 4 color pens: black, blue, green, and red.
- \* 4 character sizes: 10, 20, 40, and 80 columns per line.
- \* 16 dash sizes: from solid line to points separated by 0.2mm.
- \* 90 degree character rotation possible.
- \* Switchable char. set: from UPPER/lower to LOWER/upper case.
- \* Paper width = 4.5" (extra paper & pens avail. at RADIO SHACK)
- \* Unit size = 9.5"D X 10.75"W X 3.75"H
- \* X-Y single step resolution = 0.2mm (0.0078 inch)
- \* Number of X steps = 0 to +479
- \* Number of Y steps = -998 to +998
- \* Plotting may be either relative to an "absolute" origin or relative to a redefinable origin.

...NOTE: as of 4/1/87, the 1520 (new in orig. box) is available from ALL ELECTRONICS CORP., P.O. Box 20406, Los Angeles, CA 90006; phone (1-800-826-5432) for \$49.95 + \$3.00 shipping.

### ----- I/F Board Specifications: -----

- \* Full on-board decoding. (port 63 is used)
- \* Only 4 ICs, 1 cap., a 6-pin DIN plug/4-cond. cable required.
- \* High quality circuit board features plated-through holes.
- \* May be plugged directly into a mother board or, for a small additional cost, a keyed edge connector will be supplied for alternate connection to the 2068's rear bus.

### ----- I/F Driver Software Particulars: -----

- \* M.C. is 255 bytes long & resides in the printer-buffer area.
- \* LPRINT works as usual; AT, TAB, & "," are not supported, but may be functionally replaced with the plotter "move" command.
- \* LLIST is not supported, but this is no great loss as the 1520 is a hi-resolution color plotter first and a printer second.
- \* Plot/print control codes and parameters are sent via a LPRINT handler. i.e.: to draw (pen down) from present pen location to point (x,200) relative to the absolute origin, use the command LPRINT CHR\$ 24;"0";x";",200". Note that x and y can be calculated values from within the LPRINT command itself.



## SCREEN-TO-PLOTTER UTILITY PROG.

Basically, the SCREEN-TO-PLOTTER utility program provides for simplified control of the 1520 printer/plotter in much the same way as a word processor program facilitates the printing of text with a printer. In both cases, the software handles the job of sending to the respective devices, data and control codes necessary to plot or print a file, providing, of course, that the appropriate I/F hardware and driver software are in place.

While the SCREEN-TO-PLOTTER program can be compared to a word processor program, it is also a drawing program enabling a user to draw "freehand" an original picture simultaneously to the screen and plotter, or to LOAD an existing SCREEN\$ picture from tape and then, in a "connect-the-dots" type of process, trace around the picture with every move duplicated by the plotter and stored in a code block. These plot code blocks may be as large as 8K bytes and able to store a sequence of more than 2700 plotter commands! A block may be LOADED later to reproduce the original "digitized" picture on the plotter in every detail.

The menu, constantly displayed on the bottom two screen lines, offers seven main plotter functions:

Draw Move Text Color x=xxxy=yyy  
Quit Page (I=dash E=close Fig.)

Where: Draw, Move, Text, Color, Quit, Page, I, and E are the menu's choices and x=xxxy=yyy display the cursor's current on-screen coordinates. The cursor is controlled by pressing the keyboard direction keys or with a joystick (left side plug).

- \* Draw: Draws (pen down) from current pen location to current cursor coordinates. A joystick's "Fire" button or the "D" key activate this option.
- \* Move: Moves (pen up) from current pen location to current cursor coordinates. Press the "M" key for this option.
- \* Text: Allows for text to be printed at the current cursor coordinates. Character size, 90 degree rotation, and auto-centering are selectable before printing. Press "T" key.
- \* Color: The plotter's pen color is changed with this option to black, blue, green, or red. Screen clear is available as a sub-option. The "C" key activates this option.
- \* Page: This option advances the plotter's paper just enough to provide a new blank "page" to plot upon. Press the "P" key.
- \* Dash: This option directs any subsequent drawing (or text) to be plotted in dashed lines. Sixteen different dash sizes are selectable. Press the "I" key to activate this option.
- \* Close Fig.: This option directs the plotter to draw pen down from its current pen location to the coordinates last "moved" to. It is used to automatically close up the perimeter of a figure. Press the "E" key to choose this option.
- \* Quit: Returns control to BASIC where you can choose to SAVE the screen and/or plot data block. A previously saved plot code block may also be LOADED & "re-run". Press the "Q" key.

\* SCREEN-TO-PLOTTER is compiled w/TIMACHINE® and is very fast. Complete and detailed instructions are included with every copy.

ORDER YOURS NOW!